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[54] METHOD AND APPARATUS FOR PROVIDING A PRIVATE COMMUNICATION SYSTEM IN A PUBLIC SWITCHED TELEPHONE NETWORK

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[57] **ABSTRACT**

A private communication network through which a plurality of member users communicate using the public switched telephone network (PSTN) is disclosed herein. Each member user utilizes either a modified land line telephone directly connected to PSTN, or uses a modified mobile telephone operatively coupled to the PSTN through a wireless communication system. The private communication network includes network call manager having a telephone network interface for establishing a telephone connection with each of a plurality of telephone lines of the PSTN. Each of the plurality of telephone lines is associated with one of the plurality of member users. The network call manager further includes a switch matrix, coupled to the telephone network interface, for providing an information signal received from an active member user over a selected telephone line to the remaining non-active member users. A network call manager controller identifies the active member user the basis of push-to-talk (PTT) request signals received from the member users'telephones over the plurality of telephone lines. The telephone set of each member user will typically be capable of both standard telephone operation as well as of PTT operation over the private communication network. The security of the PTT private network may be enhanced by configuring each telephone set for encryption of all such reverse link transmissions, as well as for corresponding decryption of the forward link information from the active member user.

22 Claims, 8 Drawing Sheets